

WHAT IS CLAIMED IS:

1. A method for inhibiting aggregation of  $\beta$ -amyloid in a subject or disaggregating aggregated  $\beta$ -amyloid in a subject, comprising administering to a subject in need thereof an effective amount of a filamentous bacteriophage which displays an epitope of  $\beta$ -amyloid so as to elicit antibodies against said epitope in said subject, wherein said antibodies inhibit aggregation of said  $\beta$ -amyloid in said subject and/or cause disaggregation of said  $\beta$ -amyloid aggregate in said subject.

2. The method of claim 1, wherein said bacteriophage propagates in bacterial flora in said recipient.

3. The method of claim 1, wherein said bacteriophage propagates in *Escherichia coli*.

4. The method of claim 1, wherein said bacteriophage is fd.

5. The method of claim 1, wherein said filamentous bacteriophage which displays an epitope of  $\beta$ -amyloid is selected such that less than 30 days following an introduction of a triple dose of  $10^{10}$  units thereof to the recipient, a titer of said antibodies is above 1:50,000, as is determined by ELISA.

6. A method in accordance with claim 1, wherein said epitope of  $\beta$ -amyloid is displayed via coat glycoprotein VIII on said bacteriophage.

7. A method in accordance with claim 1, wherein said bacteriophage is M13.

8. A method in accordance with claim 1, wherein said bacteriophage displays SEQ ID NO:1.

9. A method in accordance with claim 1, wherein said bacteriophage displays a peptide selected from the group consisting of SEQ ID NO:3, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:21, and SEQ ID NO:22.

10. A method in accordance with claim 8, wherein said epitope of  $\beta$ -amyloid is displayed via coat glycoprotein VIII on said bacteriophage.

11. A method in accordance with claim 9, wherein said epitope of  $\beta$ -amyloid is displayed via coat glycoprotein VIII on said bacteriophage.

12. A method in accordance with claim 1, wherein said administering is to the olfactory system of the subject.

13. A method for inhibiting aggregation of a prion protein in a subject or disaggregating aggregated prion protein in a subject, comprising administering to a subject in need thereof an effective amount of a filamentous bacteriophage which displays an epitope of a prion protein so

as to elicit antibodies against said epitope in said subject, wherein said antibodies inhibit aggregation of said prion protein in said subject and/or cause disaggregation of said prion protein aggregate in said subject.

14. The method of claim 13, wherein said prion protein is scrapie isoform (PrP<sup>Sc</sup>).

15. A method in accordance with claim 13, wherein said epitope of a prion protein is displayed via coat glycoprotein VIII on said bacteriophage.

16. A method in accordance with claim 14, wherein said epitope of a prion protein is displayed via coat glycoprotein VIII on said bacteriophage.

17. A method in accordance with claim 13, wherein said administering is to the olfactory system of the subject.